

QUARTERLY PRIVATE EQUITY BOARD UPDATE

For the period ended December 31, 2021

Report Prepared For:

Pennsylvania State Employees' Retirement System



TABLE OF CONTENTS

Performance Summary.....	1
Portfolio Performance vs Russell 3000	2
Portfolio Performance vs. Benchmarks.....	3
Quarterly Valuation Movement	4
Vintage Year Performance.....	5
IRR Performance by Vintage Year	5
TVM Performance by Vintage Year	5
Diversification.....	6
Fund Geographic Diversification	6
Core Portfolio Returns.....	7
Performance by Sector	7
Cash Flow Activity.....	8
Quarterly Cash Flow Activity	8
Annual Cash Flow Activity	9
Cash Flow by Sector	10
Unfunded by Vintage Year.....	11
Schedule of Investments	12
Schedule of Investments by Vintage Year	12
Schedule of Investments by Sector	21
End Notes	29
Defininitions.....	30

Disclaimer on this Page - Redacted

PERFORMANCE SUMMARY

StepStone Group LP (“StepStone”) was engaged by Pennsylvania State Employees’ Retirement System (“SERS”) to provide Private Equity services for prospective investment opportunities, as well as portfolio management.

StepStone monitors investments under the entity Pennsylvania State Employees’ Retirement System (“the Portfolio”).

The following table illustrates the Portfolio’s since inception investment performance as of December 31, 2021, as well as the quarter-over-quarter and year-over-year change.

The Portfolio is generating a since inception net IRR of 12.7% at December 31, 2021, unchanged quarter-over-quarter.

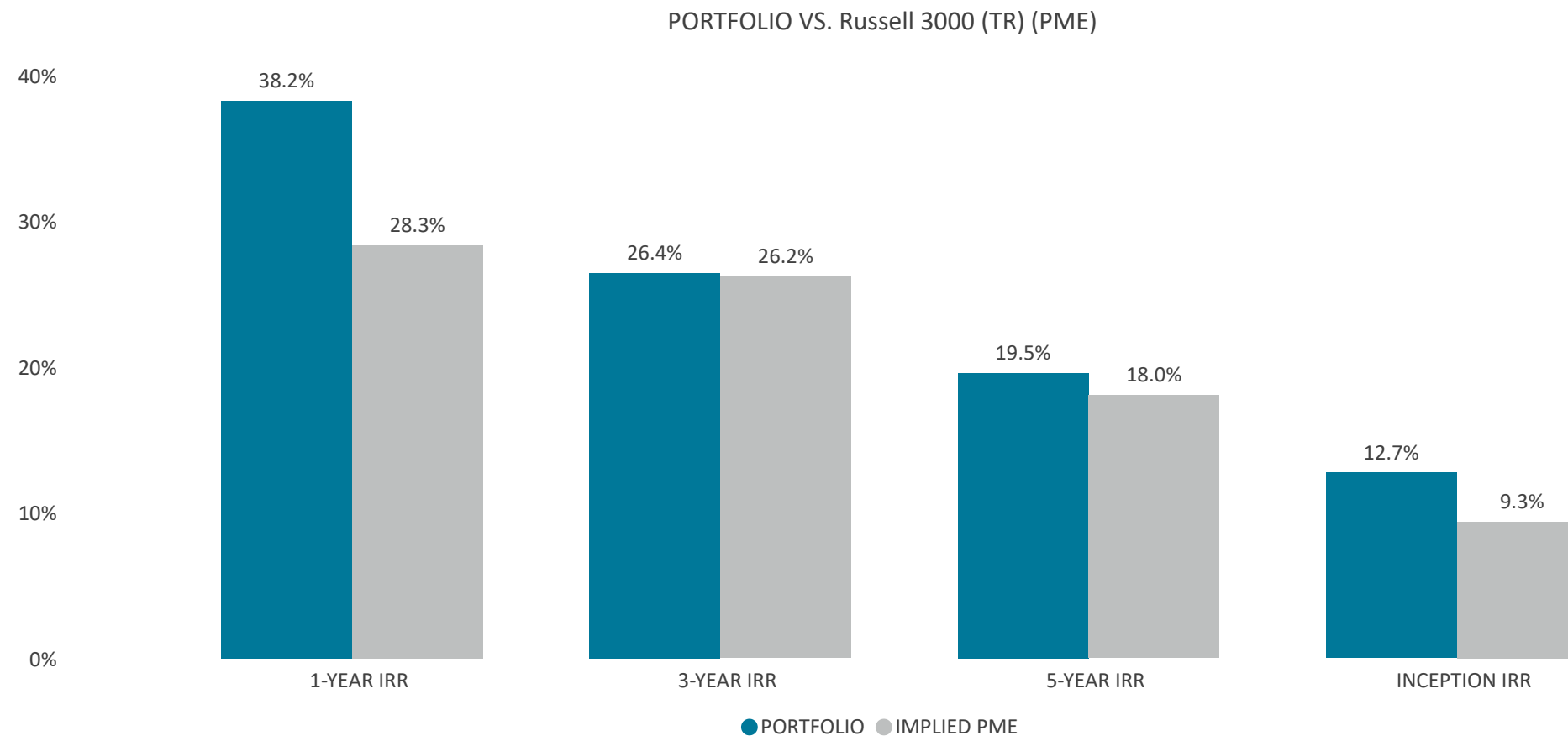
As of December 31, 2021. In USD millions.

SERS PORTFOLIO PERFORMANCE SUMMARY					
	December 31, 2021	September 30, 2021	December 31, 2020	QUARTERLY Δ	ANNUAL Δ
Number of Managers	116	116	116	0	0
Number of Investments	333	332	327	1	6
Number of Active Investments	178	183	182	(5)	(4)
Committed Capital	\$14,466.3	\$14,369.8	\$14,016.0	\$96.4	\$450.3
Unfunded Commitment	2,221.7	2,338.1	2,708.7	(116.4)	(487.0)
Total Exposure	8,602.1	8,693.8	7,732.3	(91.7)	869.9
Total Contributed	18,422.3	18,164.6	17,371.6	257.7	1,050.6
Total Distributed	25,108.0	24,680.7	23,547.8	427.3	1,560.2
Total Market Value	6,380.4	6,355.7	5,023.6	24.7	1,356.8
Since Inception G/L	13,066.1	12,871.8	11,199.7	194.4	1,866.4
Total Value	\$31,488.4	\$31,036.4	\$28,571.4	\$452.0	\$2,917.0
Net DPI	1.4x	1.4x	1.4x		
Net TVM	1.7x	1.7x	1.6x		
Net IRR	12.7%	12.7%	12.4%	0 bps	30 bps

Past performance is not necessarily indicative of future results and there can be no assurance that the investment will achieve comparable results or avoid substantial losses.

PERFORMANCE SUMMARY CONTINUED

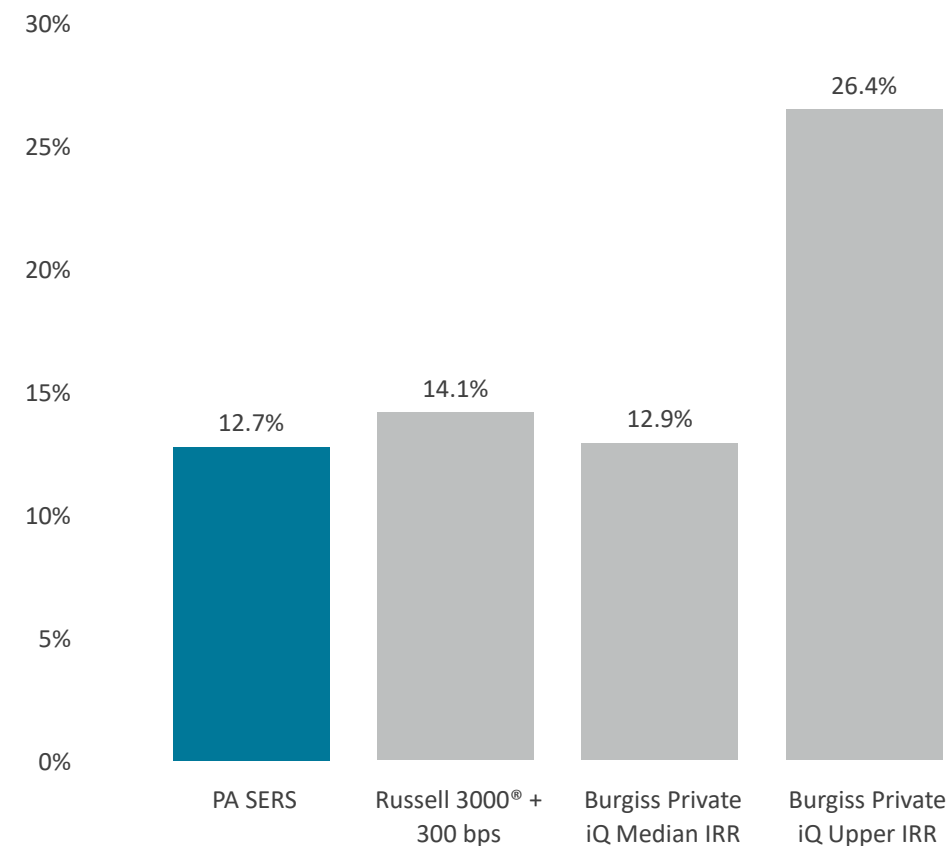
The following table illustrates the Portfolio's point-to-point investment performance as of December 31, 2021, as well as the public market equivalent (PME) based on the Russell 3000 (TR) index.



PORTFOLIO PERFORMANCE VS. BENCHMARKS

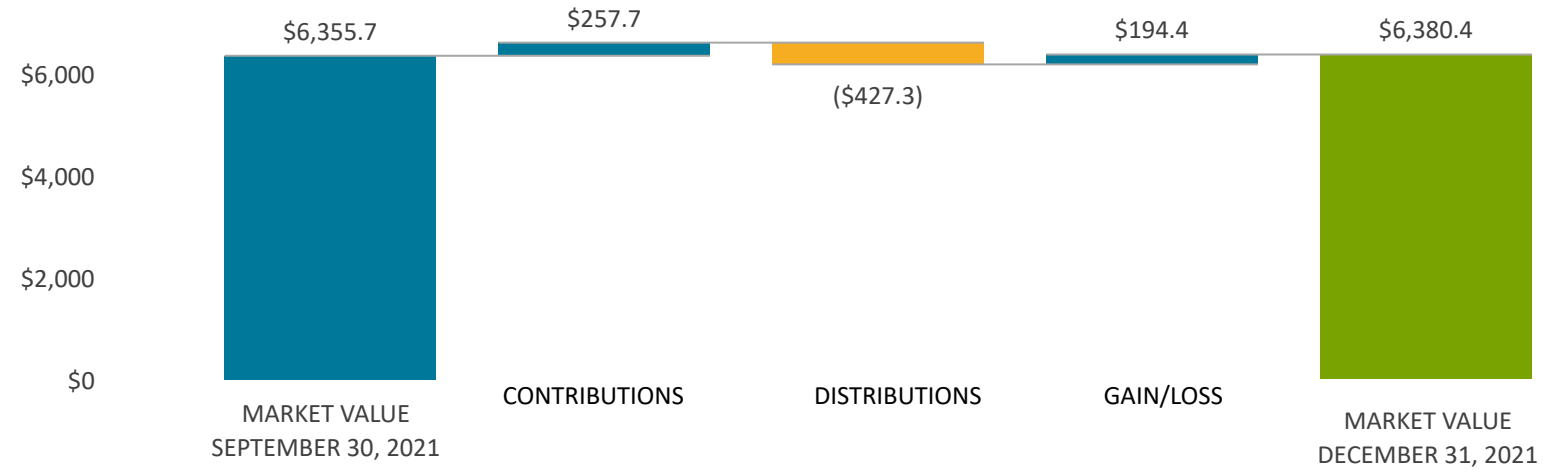
The Portfolio's performance is measured against two benchmarks, the Russell 3000® and Burgiss Private iQ. The following graph illustrates Portfolio IRR performance versus benchmarks as of December 31, 2021.

RETURNS	1 YEAR RETURN	3 YEAR RETURN	5 YEAR RETURN	10 YEAR RETURN
SERS Combined Portfolio (IRR)	38.2%	26.4%	19.5%	13.5%
Burgiss Private iQ Pooled PE Benchmark	34.6%	25.9%	21.4%	16.5%
Burgiss Private iQ All PE Top-Quartile	50.0%	35.5%	31.8%	27.9%
Russell 3000®	25.7%	25.8%	18.0%	16.3%
Russell 3000® + 300 bps	28.7%	28.8%	21.0%	19.3%
SERS Core Buyout (IRR)	32.9%	25.8%	21.3%	16.9%
Burgiss Private iQ Pooled Buyout Benchmark	34.2%	23.6%	20.0%	15.7%
Burgiss Private iQ Buyout Top-Quartile	47.3%	31.2%	29.4%	25.7%
SERS Core Growth Equity (IRR)	62.5%	47.1%	35.9%	22.7%
Burgiss Private iQ Pooled VC Benchmark	43.1%	38.0%	29.3%	21.5%
Burgiss Private iQ VC Top-Quartile	67.8%	45.7%	38.3%	34.2%
SERS Core Special Situations (IRR)	48.0%	27.1%	19.3%	13.3%
Burgiss Private iQ Pooled SS Benchmark	14.9%	10.1%	9.4%	9.9%
Burgiss Private iQ SS Top-Quartile	20.9%	15.7%	15.0%	14.9%
SERS Keystone Legacy Fund (IRR)	13.1%	5.3%	4.8%	7.3%
Burgiss Private iQ Pooled PE Benchmark	34.6%	25.9%	21.4%	16.5%
Burgiss Private iQ All PE Top-Quartile	50.0%	35.5%	31.8%	27.9%

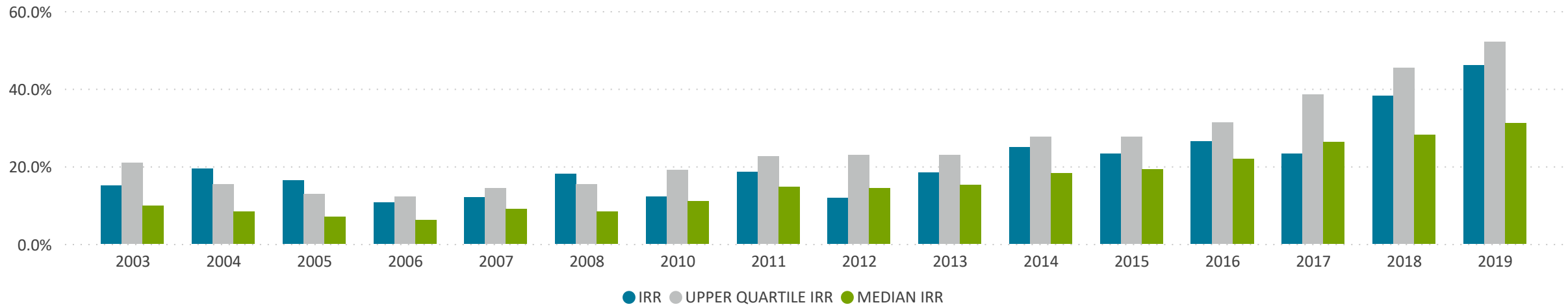


QUARTERLY VALUATION MOVEMENT

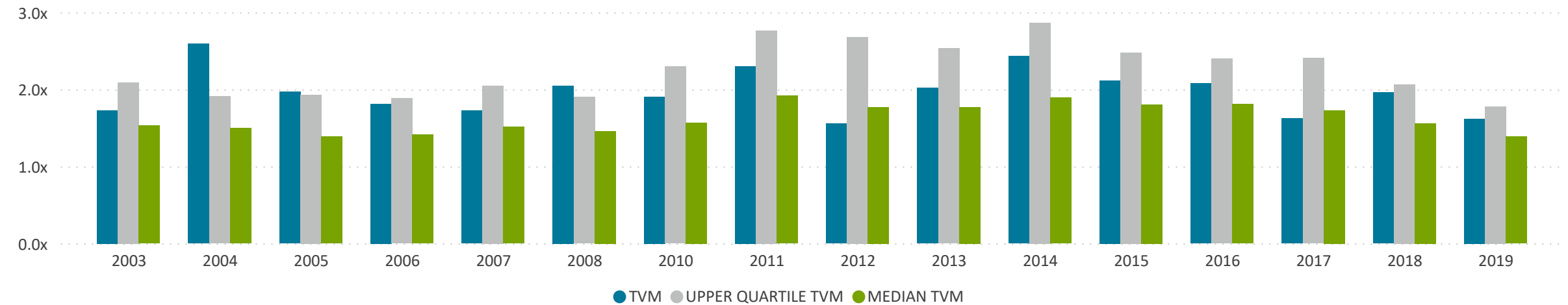
During the fourth quarter of 2021, the value of the Portfolio increased by \$194.4 million, or 3.1%.



IRR PERFORMANCE BY VINTAGE YEAR



TVM PERFORMANCE BY VINTAGE YEAR



FUND GEOGRAPHIC DIVERSIFICATION

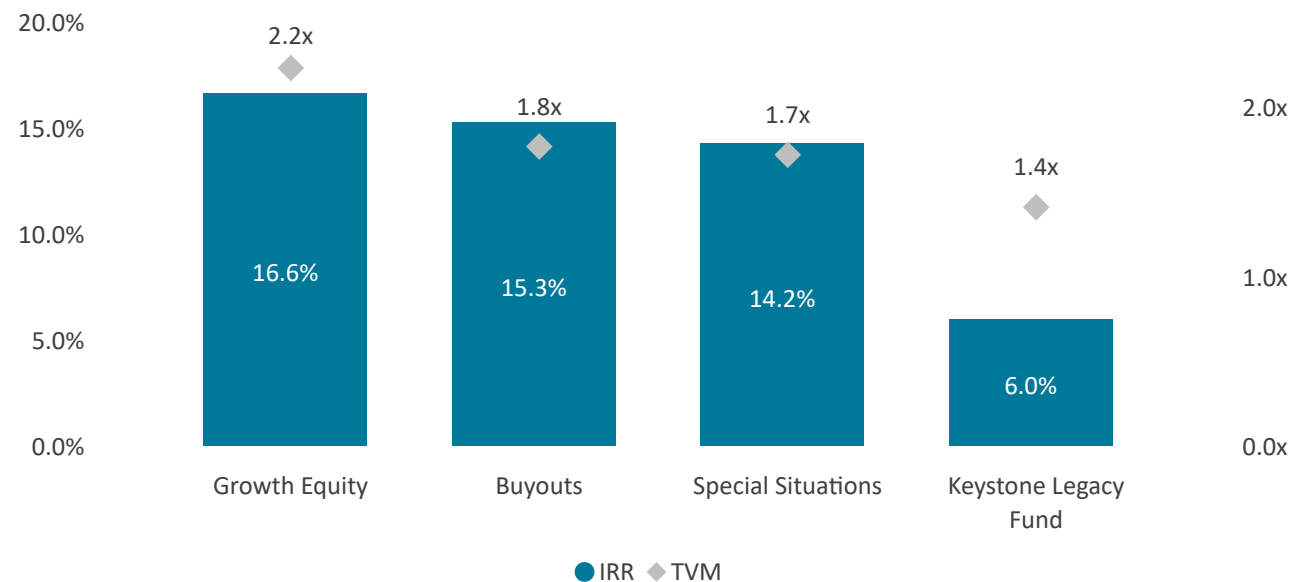
As of December 31, 2021. In USD millions.

GEOGRAPHY	NAV	% OF TOTAL	UNFUNDED	% OF TOTAL	TOTAL EXPOSURE	% OF TOTAL
North America	\$3,743.2	58.7%	\$1,328.7	59.8%	\$5,071.9	59.0%
Keystone Legacy Fund	\$505.9	7.9%	\$106.3	4.8%	\$612.1	7.1%
Global	\$622.5	9.8%	\$490.5	22.1%	\$1,113.1	12.9%
Europe	\$664.9	10.4%	\$172.0	7.7%	\$836.9	9.7%
Emerging Markets	\$181.3	2.8%	\$14.2	0.6%	\$195.5	2.3%
Asia	\$662.6	10.4%	\$110.0	5.0%	\$772.6	9.0%
Total	\$6,380.4	100.0%	\$2,221.7	100.0%	\$8,602.1	100.0%

CORE PORTFOLIO PERIODIC RETURNS VS. RUSSELL 3000 INDEX

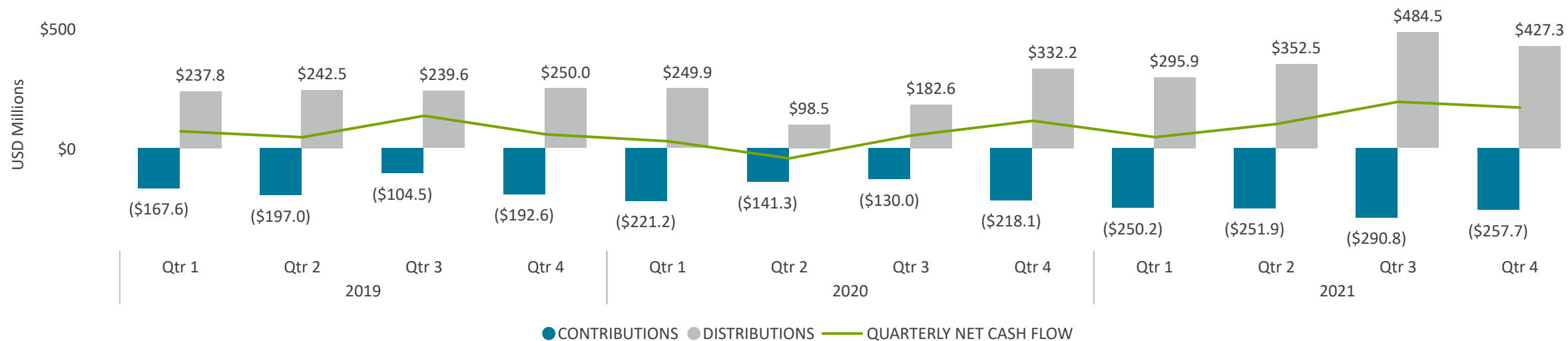
BENCHMARK	1 YEAR RETURN	3 YEAR RETURN	5 YEAR RETURN	10 YEAR RETURN	SINCE INCEPTION
SERS Core Portfolio (IRR)	41.5%	30.9%	24.4%	17.6%	15.6%
Russell 3000®	25.7%	25.8%	18.0%	16.3%	11.1%
Russell 3000® + 300 bps	28.7%	28.8%	21.0%	19.3%	14.1%
PA SERS Outperformance/(Underperformance)					
Russell 3000® Net	15.9%	5.1%	6.5%	1.3%	4.4%
Russell 3000® + 300 bps Net	12.9%	2.1%	3.5%	(1.7%)	1.4%

PERFORMANCE BY SECTOR



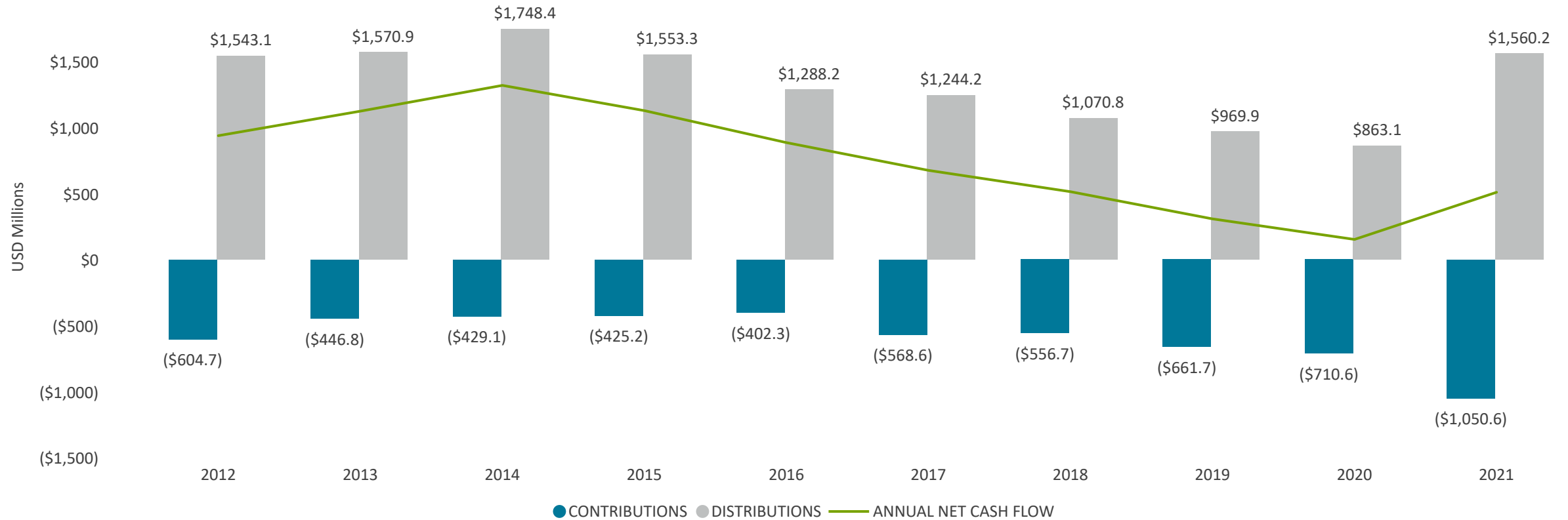
QUARTERLY CASH FLOW ACTIVITY

During the fourth quarter of 2021, the Portfolio contributed \$257.7 million and received \$427.3 million of distributions, for a net cash inflow of \$169.7 million.

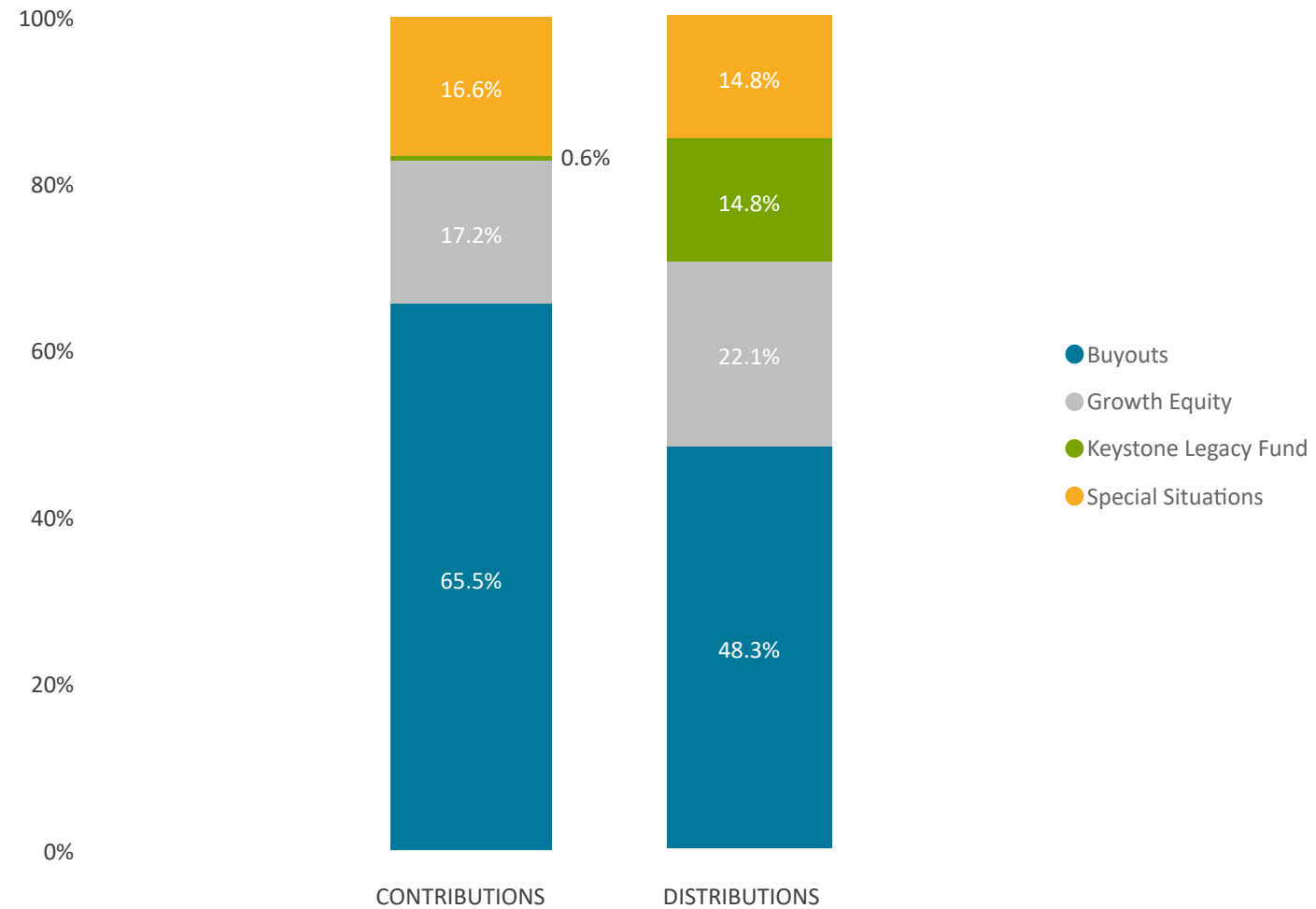


ANNUAL CASH FLOW ACTIVITY

During the twelve months ended December 31, 2021, the Portfolio contributed \$1,050.6 million and received \$1,560.2 million of distributions, for a net cash inflow of \$509.6 million.

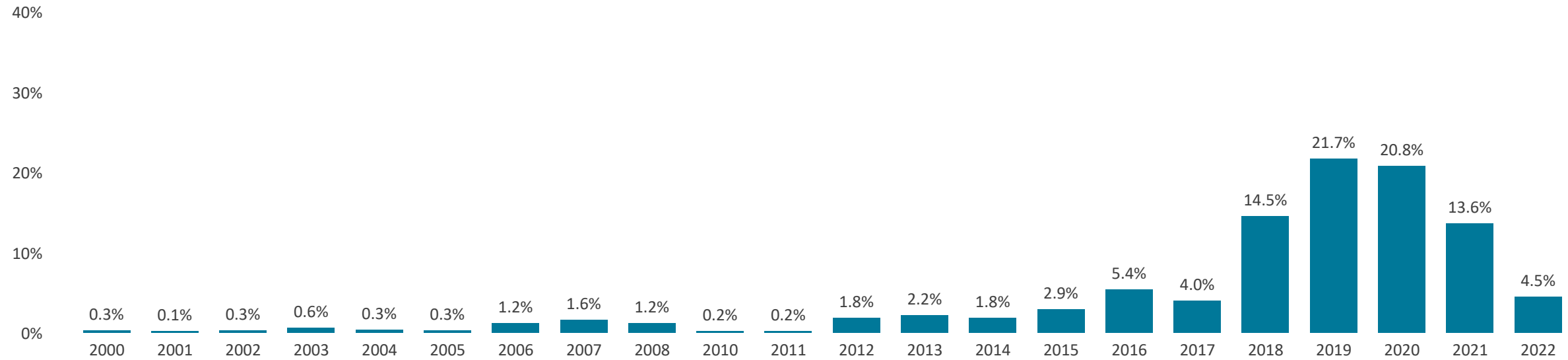


CASH FLOW BY SECTOR



UNFUNDED % by VINTAGE YEAR

The following chart provides unfunded commitments by vintage year as a percentage of the Portfolio's total unfunded commitments.



SCHEDULE OF INVESTMENTS BY VINTAGE YEAR

As of December 31, 2021

VINTAGE	FUND	SECTOR	COMMITMENT	CONTRIBUTIONS	DISTRIBUTIONS	MARKET VALUE	GAIN/LOSS	TVM	IRR	IRR RANK	TVM RANK
1997	Apollo Investment Fund IV	Buyouts	\$75,000,000	\$74,838,620	\$124,814,033	\$13,975	\$49,989,388	1.7x	8.5%	Second	Second
1997 Total			\$75,000,000	\$74,838,620	\$124,814,033	\$13,975	\$49,989,388	1.7x	8.5%	Second	Second
1998	HarbourVest IPEP III	Buyouts	40,000,000	39,400,000	61,092,165	\$79,432	\$21,771,597	1.6x	8.6%	Second	Second
1998 Total			40,000,000	\$39,400,000	\$61,092,165	\$79,432	\$21,771,597	1.6x	8.6%	Second	Second
1999	HarbourVest Partners VI	Growth Equity	200,000,000	196,586,055	251,227,115	\$603,639	\$55,244,699	1.3x	3.6%	First	First
1999	Lexington Capital Partners III	Special Situations	35,000,000	34,516,449	43,576,611						
1999	New Enterprise Associates IX	Growth Equity	20,000,000	19,600,000	8,739,870	\$378,961	(\$10,481,169)	0.5x	(6.1%)	Third	Third
1999 Total			255,000,000	\$250,702,504	\$303,543,596						
2000	Apollo Investment Fund V	Buyouts	50,000,000	44,972,146	122,673,016	\$424,775	\$78,125,645	2.7x	38.8%	First	First
2000	Audax Private Equity Fund	Buyouts	35,000,000	36,839,098	56,057,910	\$476,592	\$19,695,404	1.5x	13.1%	First	Second
2000	Blackstone Communications Partners I	Buyouts	25,000,000	25,114,042	30,998,189	\$197,313	\$6,081,460	1.2x	6.2%	Second	Second
2000	New Enterprise Associates X	Growth Equity	35,000,000	35,028,000	39,412,034	\$2,722,105	\$7,106,139	1.2x	2.7%	Second	Second
2000	Permira European Fund II	Buyouts	45,672,612	45,672,612	91,560,959	\$406,053	\$46,294,401	2.0x	21.6%	First	First
2000	Providence Equity Partners IV	Buyouts	25,000,000	23,420,840	56,065,270						
2000 Total			215,672,612	\$211,046,738	\$396,767,378						
2001	Blackstone Capital IV	Buyouts	69,379,875	69,119,097	193,120,867	\$1,111,301	\$125,113,071	2.8x	36.2%	First	First
2001	Lexington Capital Partners V	Special Situations	75,000,000	74,623,418	125,170,164						
2001 Total			144,379,875	\$143,742,515	\$318,291,031						
2002	Berkshire Fund VI	Buyouts	20,000,000	18,819,615	55,273,814						
2002	GTCR VIII	Buyouts	75,000,000	69,393,599	120,471,948				22.3%	First	
2002 Total			95,000,000	\$88,213,214	\$175,745,762						
2003	HarbourVest Partners VII	Growth Equity	75,000,000	73,687,500	117,075,996	\$2,198,404	\$45,586,900	1.6x	6.7%	First	First
2003	Kelso VII	Buyouts	40,000,000	41,169,937	65,821,118	\$66,276	\$24,717,457	1.6x	11.4%	Second	Second
2003	New Enterprise Associates 11	Growth Equity	25,000,000	25,000,000	63,385,828	\$3,366,138	\$41,751,966	2.7x	15.5%	First	First
2003	Permira European Fund III	Buyouts	127,062,518	127,340,454	218,052,206	\$508,690	\$91,220,442	1.7x	26.1%	Second	Second

SCHEDULE OF INVESTMENTS BY VINTAGE YEAR

As of December 31, 2021

VINTAGE	FUND	SECTOR	COMMITMENT	CONTRIBUTIONS	DISTRIBUTIONS	MARKET VALUE	GAIN/LOSS	TVM	IRR	IRR RANK	TVM RANK
2003	TPG Partners IV	Buyouts	27,907,484	27,981,463	58,314,713						
2003 Total			294,970,002	\$295,179,353	\$522,649,860						
2004	ABRY Partners V	Buyouts	45,000,000	41,752,543	84,778,199						
2004	AXA Secondary Fund III	Special Situations	26,000,000	21,737,894	37,244,706						
2004	AXA Secondary Fund III-2	Special Situations	14,000,000	11,677,210	19,062,764						
2004	Providence Equity Partners V	Buyouts	45,000,000	42,692,347	52,204,745						
2004 Total			130,000,000	\$117,859,994	\$193,290,413	\$455,301	\$75,885,720	1.6x	12.6%	Second	Second
2005	Apollo Investment Fund VI	Buyouts	40,000,000	38,911,805	64,467,407	\$737,719	\$26,293,320	1.7x	8.6%	Second	Second
2005	Audax Private Equity Fund II	Buyouts	25,000,000	25,517,152	46,325,622	\$201,249	\$21,009,719	1.8x	14.1%	First	Second
2005	HIPEP V-Asia Pacific & Rest of World	Buyouts	30,000,000	28,245,316	37,866,268	\$2,289,950	\$11,910,902	1.4x	5.9%	Third	Second
2005	Lexington Capital Partners VI	Special Situations	50,000,000	53,066,325	72,230,203						
2005	Lightspeed Venture Partners VII	Growth Equity	18,000,000	18,000,000	52,755,264						
2005	Newbridge Asia IV	Buyouts	40,000,000	38,903,378	86,585,520						
2005	OCM/GFI Power Opportunities Fund II	Buyouts	13,431,284	13,470,852	41,657,114						
2005 Total			216,431,284	\$216,114,829	\$401,887,399	\$10,234,582	\$196,007,152	1.9x	13.3%	First	Second
2006	ABRY Senior Equity II	Special Situations	30,000,000	28,388,642	45,127,413						
2006	Asia Alternatives Capital Partners	Buyouts	25,000,000	25,218,098	43,154,070	\$3,747,988	\$21,683,960	1.9x	11.1%	Second	Second
2006	AXA Secondary Fund IV	Special Situations	80,000,000	70,134,752	99,186,788						
2006	Berkshire Fund VII	Buyouts	32,000,000	32,613,937	68,596,870						
2006	Blackstone Capital Partners V	Buyouts	150,000,000	150,111,788	247,901,964	\$2,909,471	\$100,699,647	1.7x	7.6%	Second	Second
2006	Centerbridge Capital Partners I	Special Situations	50,000,000	57,337,396	117,317,806	\$2,207,310	\$62,187,720	2.1x	19.2%	First	First
2006	Eureka II	Buyouts	20,000,000	21,906,935	22,842,724	\$4,762,530	\$5,698,319	1.3x	4.4%	Third	Third
2006	Francisco Partners II	Buyouts	30,000,000	29,383,916	43,490,515	\$3,919,178	\$18,025,776	1.6x	10.1%	Second	Second
2006	HarbourVest Partners VIII	Growth Equity	100,000,000	98,000,000	172,989,043	\$52,122,377	\$127,111,420	2.3x	12.0%	First	First
2006	Hellman & Friedman Capital Partners VI	Buyouts	125,000,000	119,913,412	222,910,013	\$2,317,160	\$105,313,761	1.9x	12.9%	First	Second

SCHEDULE OF INVESTMENTS BY VINTAGE YEAR

As of December 31, 2021

VINTAGE	FUND	SECTOR	COMMITMENT	CONTRIBUTIONS	DISTRIBUTIONS	MARKET VALUE	GAIN/LOSS	TVM	IRR	IRR RANK	TVM RANK
2006	Madison Dearborn Capital Partners V	Buyouts	63,817,077	71,556,584	114,081,412	\$3,591,450	\$46,116,278	1.6x	7.3%	Second	Second
2006	New Enterprise Associates 12	Growth Equity	35,000,000	35,631,130	47,061,881	\$4,565,294	\$15,996,045	1.4x	6.9%	Second	Second
2006	NewSpring Growth Capital II	Growth Equity	10,000,000	9,850,000	19,519,679						
2006	Permira IV	Buyouts	136,368,331	138,422,695	208,443,061	\$48,546,763	\$118,567,129	1.9x	9.9%	Second	Second
2006	TPG Partners V	Buyouts	88,831,038	92,531,812	130,072,991	\$337,111	\$37,878,290	1.4x	4.8%	Third	Third
2006 Total			976,016,446	\$981,001,098	\$1,602,696,229	\$131,457,666	\$753,152,797	1.8x	9.8%	Second	Second
2007	ABRY Advanced Securities Fund	Special Situations	7,262,950	23,529,104	38,786,236						
2007	Advent Latin American Private Equity Fund IV	Buyouts	30,000,000	30,797,073	43,955,921	\$2,672,063	\$15,830,911	1.5x	9.0%	Second	Third
2007	Asia Alternatives Capital Partners II	Buyouts	29,949,500	29,074,086	56,540,301	\$21,921,490	\$49,387,705	2.7x	17.7%	First	First
2007	Audax Private Equity Fund III	Buyouts	37,000,000	42,498,691	82,716,671	\$965,050	\$41,183,031	2.0x	15.0%	Second	Second
2007	Battery Ventures VIII	Growth Equity	25,000,000	25,050,751	60,396,581						
2007	Dover Street VII	Special Situations	30,000,000	28,696,128	40,300,221	\$1,256,177	\$12,860,270	1.4x	9.2%	Third	Third
2007	JMI Equity Fund VI	Growth Equity	40,000,000	40,000,246	69,876,395	\$1,514,758	\$31,390,907	1.8x	11.5%	Second	Second
2007	Kelso VIII	Buyouts	150,000,000	146,524,968	193,459,463	\$21,387,092	\$68,321,587	1.5x	7.4%	Third	Third
2007	OCM Opportunities Fund VII	Special Situations	40,000,000	40,000,000	54,845,803						
2007	OCM Opportunities Fund VII b	Special Situations	40,000,000	36,000,000	62,303,999						
2007	Providence Equity Partners VI	Buyouts	49,976,748	54,530,937	75,215,312						
2007	TPG Asia V	Buyouts	22,500,000	21,964,311	27,774,733	\$3,582,876	\$9,393,298	1.4x	6.4%	Third	Third
2007	Weathergage Venture Capital	Growth Equity	25,000,000	22,875,000	42,640,891	\$18,120,177	\$37,886,068	2.7x	13.9%	Second	Second
2007 Total			526,689,198	\$541,541,295	\$848,812,527	\$83,943,996	\$391,215,228	1.7x	10.9%	Second	Second
2008	ABRY Partners VI	Buyouts	50,000,000	60,107,028	107,944,545						
2008	Advent International GPE VI-A	Buyouts	35,000,000	35,146,325	70,431,146	\$4,034,321	\$39,319,142	2.1x	16.7%	First	First
2008	Battery Ventures VIII Side Car Fund	Growth Equity	6,768,000	6,803,790	18,828,496						
2008	Great Hill Equity Partners IV	Buyouts	25,000,000	25,125,662	59,603,949						
2008	H.I.G. Bayside Debt & LBO Fund II	Special Situations	30,000,000	31,448,253	48,684,576						

SCHEDULE OF INVESTMENTS BY VINTAGE YEAR

As of December 31, 2021

VINTAGE	FUND	SECTOR	COMMITMENT	CONTRIBUTIONS	DISTRIBUTIONS	MARKET VALUE	GAIN/LOSS	TVM	IRR	IRR RANK	TVM RANK
2008	Lightspeed Venture Partners VIII	Growth Equity	15,000,000	15,000,000	36,565,286						
2008	LLR Equity Partners III	Buyouts	30,000,000	29,108,722	63,935,615	\$2,501,142	\$37,328,035	2.3x	16.6%	Second	First
2008	Madison Dearborn Capital Partners VI	Buyouts	50,000,000	53,258,583	112,050,064	\$8,591,765	\$67,383,246	2.3x	23.3%	First	First
2008	TPG Partners VI	Buyouts	44,294,641	50,576,261	72,308,182	\$2,843,171	\$24,575,092	1.5x	9.6%	Second	Second
2008 Total			286,062,641	\$306,574,625	\$590,351,859	\$52,610,964	\$336,388,198	2.1x	18.6%	First	First
2010	Advent Latin American Private Equity Fund V	Buyouts	15,000,000	14,430,000	8,325,000	\$7,217,983	\$1,112,983	1.1x	1.3%	Fourth	Fourth
2010	Avenue Special Situations Fund VI	Special Situations	20,000,000	20,068,464	21,075,410						
2010	Oaktree Power Opportunities Fund III	Buyouts	25,000,000	19,267,532	28,823,334						
2010	OCM Opportunities Fund VIII	Special Situations	12,500,000	12,583,425	18,155,981						
2010	OCM Opportunities Fund VIIIb	Special Situations	12,500,000	12,500,000	13,585,884						
2010	Weathergag Venture Capital II	Growth Equity	25,000,000	23,250,000	52,404,909	\$52,707,283	\$81,862,192	4.5x	22.0%	Second	First
2010 Total			110,000,000	\$102,099,421	\$142,370,518	\$67,602,293	\$107,873,390	2.1x	12.5%	Second	Second
2011	ABRY Partners VII	Buyouts	30,000,000	38,270,816	50,476,322						
2011	Asia Alternatives Korea Buyout Investors (Hahn & Co)	Buyouts	7,000,000	8,836,636	12,677,843	\$1,408,902	\$5,250,109	1.6x	10.8%	Third	Third
2011	Francisco Partners III	Buyouts	20,000,000	20,514,684	58,281,352	\$9,892,722	\$47,659,390	3.3x	24.0%	Second	First
2011	H.I.G. Growth Buyouts & Equity Fund II	Buyouts	15,000,000	15,898,204	10,010,436						
2011	Insight Venture Partners VII	Growth Equity	20,000,000	22,129,992	53,076,524	\$19,852,965	\$50,799,497	3.3x	22.9%	Second	Second
2011	JMI Equity Fund VII	Growth Equity	10,000,000	9,780,000	23,216,560	\$907,930	\$14,344,490	2.5x	17.8%	Third	Third
2011	Meritech Capital Partners IV	Growth Equity	20,000,000	19,700,000	43,659,998						
2011 Total			\$122,000,000	\$135,130,331	\$251,399,035	\$72,807,732	\$189,076,436	2.4x	19.1%	Second	Second
2012	Advent International GPE VII-B	Buyouts	40,000,000	37,600,000	53,913,296	\$18,572,347	\$34,885,643	1.9x	14.7%	Second	Second
2012	Asia Alternatives Capital Partners III	Buyouts	50,000,000	55,283,150	64,534,633	\$39,967,917	\$49,219,400	1.9x	14.4%	Second	Second
2012	AXA Secondary Fund V B	Special Situations	75,000,000	61,682,742	97,337,534						
2012	Carlyle Energy Mezzanine Opportunities Fund	Buyouts	50,000,000	65,405,460	33,741,361	\$5,914,674	(\$25,749,425)	0.6x	(16.5%)	Fourth	Fourth
2012	Penn Asia Investors	Buyouts	133,000,000	119,248,377	84,577,304	\$130,842,991	\$96,171,918	1.8x	17.6%	Second	Second

SCHEDULE OF INVESTMENTS BY VINTAGE YEAR

As of December 31, 2021

VINTAGE	FUND	SECTOR	COMMITMENT	CONTRIBUTIONS	DISTRIBUTIONS	MARKET VALUE	GAIN/LOSS	TVM	IRR	IRR RANK	TVM RANK
2012 Total			348,000,000	\$339,219,729	\$334,104,128						
2013	Eureka Growth Capital III	Buyouts	20,000,000	15,767,810	35,336,560	\$8,726,961	\$28,295,711	2.8x	45.7%	First	Second
2013	FSN Capital IV	Buyouts	37,951,258	38,520,666	58,240,585						
2013	H.I.G. Bayside Loan Opp. Fund III	Special Situations	50,000,000	42,696,553	49,904,323						
2013	Incline Equity Partners III	Buyouts	15,000,000	16,006,245	41,866,592	\$154,590	\$26,014,936	2.6x	33.9%	First	Second
2013	Insight Venture Partners VIII	Growth Equity	50,000,000	53,016,419	111,531,574	\$53,255,836	\$111,770,991	3.1x	22.3%	Second	Second
2013	LBC Credit Partners III	Special Situations	50,000,000	46,696,243	52,653,904				8.3%	Fourth	
2013	Oaktree Opportunities Fund IX	Special Situations	50,000,000	50,000,000	31,588,063						
2013	Platinum Equity Capital Partners III	Special Situations	50,000,000	47,092,256	85,711,250	\$15,451,679	\$54,070,673	2.1x	39.0%	First	Second
2013 Total			322,951,258	\$309,796,191	\$466,832,850	\$159,446,077	\$316,482,736	2.0x	18.4%	Second	Second
2014	Capvis Equity IV	Buyouts	42,939,202	46,342,729	33,984,236	\$23,580,779	\$11,222,287				
2014	GTCR Fund XI	Buyouts	25,000,000	24,135,037	47,142,609				41.9%	First	
2014	H.I.G. Europe Capital Partners II	Buyouts	24,549,740	22,568,576	17,730,497						
2014	Hahn & Company II	Buyouts	50,000,000	55,424,743	23,584,396						
2014	Horizon Impact Fund	Buyouts	50,000,000	44,629,802	51,389,842	\$31,434,493	\$38,194,533	1.9x	17.7%	Third	Third
2014	Horizon Strategic Fund - Carlyle Group	Buyouts	100,000,000	105,970,198	112,895,498	\$83,530,153	\$90,455,453	1.9x	15.3%	Third	Third
2014	KPS Special Situations Fund IV	Special Situations	25,000,000	23,523,004	24,290,154	\$18,171,414	\$18,938,564	1.8x	25.0%	Second	Third
2014	LLR Equity Partners IV	Buyouts	50,000,000	45,485,764	89,434,305	\$23,599,256	\$67,547,797	2.5x	27.4%	Second	Second
2014	Meritech Capital Partners V	Growth Equity	23,000,000	21,965,000	114,467,705						
2014	Sentinel Capital Partners V	Buyouts	10,000,000	10,188,099	14,192,807	\$6,966,420	\$10,971,128	2.1x	21.9%	Second	Third
2014 Total			400,488,942	\$400,232,952	\$529,112,050	\$445,153,051	\$574,032,149	2.4x	24.9%	Second	Second
2015	ABRY Partners VIII	Buyouts	25,000,000	29,677,791	35,538,197						
2015	ADV Opportunities Fund I	Special Situations	50,000,000	60,328,228	17,614,551	\$69,285,518	\$26,571,841	1.4x	8.7%	Fourth	Third
2015	Advent Latin American Private Equity Fund VI	Buyouts	25,000,000	22,875,000	9,875,000	\$30,629,767	\$17,629,767	1.8x	20.0%	Second	Third
2015	Centerbridge Capital Partners III	Special Situations	30,000,000	38,480,700	27,967,556	\$34,402,758	\$23,889,614	1.6x	20.4%	Second	Third

SCHEDULE OF INVESTMENTS BY VINTAGE YEAR

As of December 31, 2021

VINTAGE	FUND	SECTOR	COMMITMENT	CONTRIBUTIONS	DISTRIBUTIONS	MARKET VALUE	GAIN/LOSS	TVM	IRR	IRR RANK	TVM RANK
2015	Clearlake Capital Partners IV	Special Situations	15,000,000	22,983,242	33,553,794	\$17,414,681	\$27,985,233	2.2x	34.7%	First	Second
2015	Francisco Partners IV	Buyouts	25,000,000	24,656,280	36,902,177	\$50,791,516	\$63,037,413	3.6x	34.5%	First	First
2015	H.I.G. Bayside Loan Opp. Fund IV	Special Situations	25,000,000	22,626,299	20,048,554						
2015	H.I.G. Brazil and Latin America Partners	Buyouts	50,000,000	41,178,074	6,806,634						
2015	Insight Venture Partners IX	Growth Equity	50,000,000	52,784,788	48,528,033	\$182,868,978	\$178,612,224	4.4x	35.6%	Second	First
2015	JMI Equity Fund VIII	Growth Equity	25,000,000	26,900,000	39,423,605	\$27,314,061	\$39,837,666	2.5x	31.8%	Second	Third
2015	Lightspeed India Partners I	Growth Equity	15,000,000	14,137,500	2,125,958						
2015	Primavera Capital Fund II	Buyouts	50,000,000	55,692,341	20,050,451	\$67,715,967	\$32,074,076	1.6x	11.7%	Third	Third
2015	Ridgmont Equity Partners II	Buyouts	50,000,000	50,971,205	50,960,707						
2015	RRJ Capital Master Fund III	Special Situations	50,000,000	47,336,409	44,239,368	\$15,877,197	\$12,780,156	1.3x	11.8%	Third	Fourth
2015 Total			485,000,000	\$510,627,857	\$393,634,586	\$686,715,854	\$569,722,583	2.1x	23.2%	Second	Second
2016	Advent International GPE VIII-B	Buyouts	50,000,000	47,450,001	36,531,240	\$66,791,061	\$55,872,300	2.2x	24.5%	Second	Second
2016	ASF VII B	Special Situations	100,000,000	61,854,639	36,893,131						
2016	ASF VII PA Co-Invest	Special Situations	50,000,000	29,378,255	14,471,058						
2016	Audax Private Equity Fund V	Buyouts	50,000,000	44,832,961	52,511,686	\$36,962,614	\$44,641,340	2.0x	25.8%	Second	Second
2016	Blackstone Capital Partners VII	Buyouts	50,000,000	52,514,506	21,015,625	\$64,661,262	\$33,162,381	1.6x	19.9%	Third	Third
2016	Hellman & Friedman Capital Partners VIII	Buyouts	50,000,000	51,060,710	25,930,522	\$87,609,163	\$62,478,975	2.2x	26.4%	Second	Second
2016	Providence Strategic Growth II	Growth Equity	60,000,000	77,382,659	123,500,078						
2016	Sterling Group Partners IV	Buyouts	20,000,000	19,825,799	14,490,463	\$28,804,085	\$23,468,749	2.2x	26.4%	Second	Second
2016	Vista Equity Partners Fund VI	Buyouts	150,000,000	176,571,413	126,687,002						
2016 Total			580,000,000	\$560,870,942	\$452,030,805	\$713,217,924	\$604,377,787	2.1x	26.4%	Second	Second
2017	Asia Alternatives Capital Partners V	Buyouts	50,000,000	43,467,225	5,347,237	\$47,615,564	\$9,495,576	1.2x	13.7%	Third	Fourth
2017	FSN Capital V	Buyouts	80,254,095	82,318,034	23,602,863						
2017	Horizon Impact Fund B	Buyouts	100,000,000	76,750,000	990,000	\$101,422,595	\$25,662,595	1.3x	12.9%	Fourth	Fourth
2017	Permira VI	Buyouts	56,809,657	51,150,582	22,159,631	\$83,147,246	\$54,156,295	2.1x	25.9%	Second	First

SCHEDULE OF INVESTMENTS BY VINTAGE YEAR

As of December 31, 2021

VINTAGE	FUND	SECTOR	COMMITMENT	CONTRIBUTIONS	DISTRIBUTIONS	MARKET VALUE	GAIN/LOSS	TVM	IRR	IRR RANK	TVM RANK
2017	Wind Point Partners VIII	Buyouts	100,000,000	96,616,633	78,383,775						
2017 Total			\$387,063,752	\$350,302,474	\$130,483,505	\$438,009,734	\$218,190,766	1.6x	23.3%	Third	Third
2018	Clearlake Capital Partners V	Special Situations	55,000,000	64,507,511	81,992,992	\$82,585,656	\$100,071,138	2.6x	57.8%	First	First
2018	CVC Capital Partners VII	Buyouts	92,742,361	83,559,008	5,453,903	\$133,503,897	\$55,398,792	1.7x	35.3%	Second	Second
2018	GTCR Fund XII	Buyouts	32,500,000	31,075,032	16,354,109				37.5%	Second	
2018	Hahn & Company III	Buyouts	56,250,000	27,228,269	83,933						
2018	Hahn & Company III - Supplemental Fund	Buyouts	18,750,000	10,862,000	57,377						
2018	Insight Venture Partners X	Growth Equity	100,000,000	100,373,487	30,012,391	\$281,382,785	\$211,021,689	3.1x	51.3%	Second	First
2018	Keystone Legacy Fund	Keystone Legacy Fund	200,000,000	5,588,492,866	7,355,590,790	505,879,466	2,272,977,390	1.4x	6.0%	NM	NM
2018	LLR Equity Partners V	Buyouts	75,000,000	68,340,002	19,207,856	\$86,075,887	\$36,943,741	1.5x	21.9%	Third	Third
2018	NGP Keystone	Buyouts	25,000,000	10,150,000	-	NM	NM	NM	NM	NM	NM
2018	NGP XII	Buyouts	75,000,000	49,892,983	6,722,419	\$51,781,146	\$8,610,582	1.2x	7.4%	Fourth	Fourth
2018	Providence Strategic Growth III	Growth Equity	75,000,000	66,373,803	59,188,372						
2018	Silver Lake Partners V	Buyouts	78,000,000	74,979,179	20,716,515	\$109,621,690	\$55,359,026	1.7x	28.8%	Second	Second
2018	TDR Capital IV	Buyouts	90,264,851	51,394,502	-	\$96,767,100	\$45,372,598	1.9x	52.0%	First	First
2018 Total			973,507,212	\$6,227,228,642	\$7,595,380,658	\$1,519,739,832	\$2,887,891,848	1.5x	6.7%	Fourth	Third
2019	Apollo Investment Fund IX	Buyouts	85,400,000	52,069,250	15,564,874	NM	NM	NM	NM	NM	NM
2019	ASF VIII B	Special Situations	100,000,000	43,609,295	6,622,414	NM	NM	NM	NM	NM	NM
2019	ASF VIII PA Co-Invest	Special Situations	50,000,000	9,885,240	-	NM	NM	NM	NM	NM	NM
2019	Audax Private Equity Fund VI	Buyouts	75,000,000	52,545,274	10,529,467	NM	NM	NM	NM	NM	NM
2019	Blackstone Capital Partners VIII	Buyouts	70,000,000	22,900,568	765,885	NM	NM	NM	NM	NM	NM
2019	Hellman & Friedman Capital Partners IX	Buyouts	90,000,000	84,201,337	2,535,981	NM	NM	NM	NM	NM	NM
2019	Insight Venture Partners XI	Growth Equity	75,000,000	71,250,000	133,132	NM	NM	NM	NM	NM	NM
2019	KPS Special Situations Fund V	Special Situations	75,000,000	26,983,503	1,488,047	NM	NM	NM	NM	NM	NM
2019	KPS Special Situations Mid-Cap Fund	Special Situations	25,000,000	9,945,346	1,334,931	NM	NM	NM	NM	NM	NM

SCHEDULE OF INVESTMENTS BY VINTAGE YEAR

As of December 31, 2021

VINTAGE	FUND	SECTOR	COMMITMENT	CONTRIBUTIONS	DISTRIBUTIONS	MARKET VALUE	GAIN/LOSS	TVM	IRR	IRR RANK	TVM RANK
2019	Permira VII	Buyouts	77,242,464	55,367,294	-	NM	NM	NM	NM	NM	NM
2019	Primavera Capital Fund III	Buyouts	75,000,000	78,241,480	9,345,614	NM	NM	NM	NM	NM	NM
2019	Providence Strategic Growth IV	Growth Equity	75,000,000	56,016,270	25,745,407	NM	NM	NM	NM	NM	NM
2019	TCV X	Growth Equity	75,000,000	56,289,972	-	NM	NM	NM	NM	NM	NM
2019	Thoma Bravo Fund XIII	Buyouts	75,000,000	82,149,247	38,622,739	NM	NM	NM	NM	NM	NM
2019	TSG8	Buyouts	100,000,000	50,410,549	292,630	NM	NM	NM	NM	NM	NM
2019	Vista Equity Partners Fund VII	Buyouts	75,000,000	55,188,990	492,677	NM	NM	NM	NM	NM	NM
2019	Wind Point Partners IX-A	Buyouts	75,000,000	44,311,133	1,434,440	NM	NM	NM	NM	NM	NM
2019 Total			1,272,642,464	\$851,364,748	\$114,908,237	\$1,265,013,496	\$528,556,985	NM	NM	NM	NM
2020	Altaris Health Partners V	Buyouts	50,000,000	12,112,813	-	NM	NM	NM	NM	NM	NM
2020	Ares PA Opportunities Fund, L.P. - Special Situations	Special Situations	100,000,000	39,278,730	7,821,783	NM	NM	NM	NM	NM	NM
2020	Clearlake Capital Partners VI	Special Situations	60,000,000	48,733,270	2,052,484	NM	NM	NM	NM	NM	NM
2020	CVC Capital Partners VIII	Buyouts	56,815,364	11,079,467	-	NM	NM	NM	NM	NM	NM
2020	HarbourVest PA Co-investment Fund	Buyouts	200,000,000	113,700,000	-	NM	NM	NM	NM	NM	NM
2020	LLR Equity Partners VI	Buyouts	50,000,000	20,841,712	-	NM	NM	NM	NM	NM	NM
2020	Neuberger Berman PA Co-Investment Fund	Buyouts	200,000,000	51,397,159	-	NM	NM	NM	NM	NM	NM
2020	Permira Susquehanna Opportunities - Buyout	Buyouts	40,000,000	18,557,655	-	NM	NM	NM	NM	NM	NM
2020	Thoma Bravo Discover Fund III	Buyouts	20,000,000	14,898,510	-	NM	NM	NM	NM	NM	NM
2020	Thoma Bravo Fund XIV	Buyouts	50,000,000	42,678,750	12	NM	NM	NM	NM	NM	NM
2020 Total			826,815,364	\$373,278,065	\$9,874,279	\$439,623,222	\$76,219,436	NM	NM	NM	NM
2021	Clearlake Capital Partners VII	Special Situations	100,000,000	-	-	NM	NM	NM	NM	NM	NM
2021	Hellman & Friedman X	Buyouts	100,000,000	12,180,097	-	NM	NM	NM	NM	NM	NM
2021	Insight Partners Fund XII	Growth Equity	50,000,000	17,539,234	-	NM	NM	NM	NM	NM	NM
2021	Providence Strategic Growth Europe	Growth Equity	74,086,106	39,066,018	4,290,092	NM	NM	NM	NM	NM	NM
2021	Providence Strategic Growth V	Growth Equity	50,000,000	6,939,227	-	NM	NM	NM	NM	NM	NM

SCHEDULE OF INVESTMENTS BY VINTAGE YEAR

As of December 31, 2021

VINTAGE	FUND	SECTOR	COMMITMENT	CONTRIBUTIONS	DISTRIBUTIONS	MARKET VALUE	GAIN/LOSS	TVM	IRR	IRR RANK	TVM RANK
2021 Total			374,086,106	\$75,724,576	\$4,290,092	\$80,060,272	\$8,625,788	NM	NM	NM	NM
2022	TSG 9	Buyouts	100,000,000	-	-	NM	NM	NM	NM	NM	NM
2022 Total			100,000,000	-	-	NM	NM	NM	NM	NM	NM
Total: Active Investments			9,557,777,157	\$13,502,090,713	\$15,964,362,997	\$6,380,395,421	\$8,842,667,704	1.7x	9.8%	Third	Second
Total: Liquidated Investments			4,908,476,237	\$4,920,169,744	\$9,143,634,717	\$0	\$4,223,464,973	1.9x	16.2%	Second	Second
Total: Commonwealth of Pennsylvania State Employees' Retirement System			14,466,253,394	\$18,422,260,458	\$25,107,997,714	\$6,380,395,421	\$13,066,132,677	1.7x	12.7%	Third	Second

SCHEDULE OF INVESTMENTS BY SECTOR

As of December 31, 2021

SECTOR	FUND	VINTAGE	COMMITMENT	CONTRIBUTIONS	DISTRIBUTIONS	MARKET VALUE	GAIN/LOSS	TVM	IRR	IRR RANK	TVM RANK
Buyouts	ABRY Partners V	2004	45,000,000	41,752,543	84,778,199						
Buyouts	ABRY Partners VI	2008	50,000,000	60,107,028	107,944,545						
Buyouts	ABRY Partners VII	2011	30,000,000	38,270,816	50,476,322						
Buyouts	ABRY Partners VIII	2015	25,000,000	29,677,791	35,538,197						
Buyouts	Advent International GPE VI-A	2008	35,000,000	35,146,325	70,431,146	4,034,321	39,319,142	2.1x	16.7%	First	First
Buyouts	Advent International GPE VII-B	2012	40,000,000	37,600,000	53,913,296	18,572,347	34,885,643	1.9x	14.7%	Second	Second
Buyouts	Advent International GPE VIII-B	2016	50,000,000	47,450,001	36,531,240	66,791,061	55,872,300	2.2x	24.5%	Second	Second
Buyouts	Advent Latin American Private Equity Fund IV	2007	30,000,000	30,797,073	43,955,921	2,672,063	15,830,911	1.5x	9.0%	Second	Third
Buyouts	Advent Latin American Private Equity Fund V	2010	15,000,000	14,430,000	8,325,000	7,217,983	1,112,983	1.1x	1.3%	Fourth	Fourth
Buyouts	Advent Latin American Private Equity Fund VI	2015	25,000,000	22,875,000	9,875,000	30,629,767	17,629,767	1.8x	20.0%	Second	Third
Buyouts	Altaris Health Partners V	2020	50,000,000	12,112,813	-	NM	NM	NM	NM	NM	NM
Buyouts	Apollo Investment Fund IV	1997	75,000,000	74,838,620	124,814,033	13,975	49,989,388	1.7x	8.5%	Second	Second
Buyouts	Apollo Investment Fund IX	2019	85,400,000	52,069,250	15,564,874	NM	NM	NM	NM	NM	NM
Buyouts	Apollo Investment Fund V	2000	50,000,000	44,972,146	122,673,016	424,775	78,125,645	2.7x	38.8%	First	First
Buyouts	Apollo Investment Fund VI	2005	40,000,000	38,911,805	64,467,407	737,719	26,293,320	1.7x	8.6%	Second	Second
Buyouts	Asia Alternatives Capital Partners	2006	25,000,000	25,218,098	43,154,070	3,747,988	21,683,960	1.9x	11.1%	Second	Second
Buyouts	Asia Alternatives Capital Partners II	2007	29,949,500	29,074,086	56,540,301	21,921,490	49,387,705	2.7x	17.7%	First	First
Buyouts	Asia Alternatives Capital Partners III	2012	50,000,000	55,283,150	64,534,633	39,967,917	49,219,400	1.9x	14.4%	Second	Second
Buyouts	Asia Alternatives Capital Partners V	2017	50,000,000	43,467,225	5,347,237	47,615,564	9,495,576	1.2x	13.7%	Third	Fourth
Buyouts	Asia Alternatives Korea Buyout Investors (Hahn & Co)	2011	7,000,000	8,836,636	12,677,843	1,408,902	5,250,109	1.6x	10.8%	Third	Third
Buyouts	Audax Private Equity Fund	2000	35,000,000	36,839,098	56,057,910	476,592	19,695,404	1.5x	13.1%	First	Second
Buyouts	Audax Private Equity Fund II	2005	25,000,000	25,517,152	46,325,622	201,249	21,009,719	1.8x	14.1%	First	Second
Buyouts	Audax Private Equity Fund III	2007	37,000,000	42,498,691	82,716,671	965,050	41,183,031	2.0x	15.0%	Second	Second
Buyouts	Audax Private Equity Fund V	2016	50,000,000	44,832,961	52,511,686	36,962,614	44,641,340	2.0x	25.8%	Second	Second
Buyouts	Audax Private Equity Fund VI	2019	75,000,000	52,545,274	10,529,467	NM	NM	NM	NM	NM	NM
Buyouts	Berkshire Fund VI	2002	20,000,000	18,819,615	55,273,814						

SCHEDULE OF INVESTMENTS BY SECTOR

As of December 31, 2021

SECTOR	FUND	VINTAGE	COMMITMENT	CONTRIBUTIONS	DISTRIBUTIONS	MARKET VALUE	GAIN/LOSS	TVM	IRR	IRR RANK	TVM RANK
Buyouts	Berkshire Fund VII	2006	32,000,000	32,613,937	68,596,870						
Buyouts	Blackstone Capital IV	2001	69,379,875	69,119,097	193,120,867	1,111,301	125,113,071	2.8x	36.2%	First	First
Buyouts	Blackstone Capital Partners V	2006	150,000,000	150,111,788	247,901,964	2,909,471	100,699,647	1.7x	7.6%	Second	Second
Buyouts	Blackstone Capital Partners VII	2016	50,000,000	52,514,506	21,015,625	64,661,262	33,162,381	1.6x	19.9%	Third	Third
Buyouts	Blackstone Capital Partners VIII	2019	70,000,000	22,900,568	765,885	NM	NM	NM	NM	NM	NM
Buyouts	Blackstone Communications Partners I	2000	25,000,000	25,114,042	30,998,189	197,313	6,081,460	1.2x	6.2%	Second	Second
Buyouts	Capvis Equity IV	2014	42,939,202	46,342,729	33,984,236	23,580,779	11,222,287				
Buyouts	Carlyle Energy Mezzanine Opportunities Fund	2012	50,000,000	65,405,460	33,741,361	5,914,674	(25,749,425)	0.6x	(16.5%)	Fourth	Fourth
Buyouts	CVC Capital Partners VII	2018	92,742,361	83,559,008	5,453,903	133,503,897	55,398,792	1.7x	35.3%	Second	Second
Buyouts	CVC Capital Partners VIII	2020	56,815,364	11,079,467	-	NM	NM	NM	NM	NM	NM
Buyouts	Eureka Growth Capital III	2013	20,000,000	15,767,810	35,336,560	8,726,961	28,295,711	2.8x	45.7%	First	Second
Buyouts	Eureka II	2006	20,000,000	21,906,935	22,842,724	4,762,530	5,698,319	1.3x	4.4%	Third	Third
Buyouts	Francisco Partners II	2006	30,000,000	29,383,916	43,490,515	3,919,178	18,025,776	1.6x	10.1%	Second	Second
Buyouts	Francisco Partners III	2011	20,000,000	20,514,684	58,281,352	9,892,722	47,659,390	3.3x	24.0%	Second	First
Buyouts	Francisco Partners IV	2015	25,000,000	24,656,280	36,902,177	50,791,516	63,037,413	3.6x	34.5%	First	First
Buyouts	FSN Capital IV	2013	37,951,258	38,520,666	58,240,585						
Buyouts	FSN Capital V	2017	80,254,095	82,318,034	23,602,863						
Buyouts	Great Hill Equity Partners IV	2008	25,000,000	25,125,662	59,603,949						
Buyouts	GTCR Fund XI	2014	25,000,000	24,135,037	47,142,609				41.9%	First	
Buyouts	GTCR Fund XII	2018	32,500,000	31,075,032	16,354,109				37.5%	Second	
Buyouts	GTCR VIII	2002	75,000,000	69,393,599	120,471,948				22.3%	First	
Buyouts	H.I.G. Brazil and Latin America Partners	2015	50,000,000	41,178,074	6,806,634						
Buyouts	H.I.G. Europe Capital Partners II	2014	24,549,740	22,568,576	17,730,497						
Buyouts	H.I.G. Growth Buyouts & Equity Fund II	2011	15,000,000	15,898,204	10,010,436						
Buyouts	Hahn & Company II	2014	50,000,000	55,424,743	23,584,396						
Buyouts	Hahn & Company III	2018	56,250,000	27,228,269	83,933						

SCHEDULE OF INVESTMENTS BY SECTOR

As of December 31, 2021

SECTOR	FUND	VINTAGE	COMMITMENT	CONTRIBUTIONS	DISTRIBUTIONS	MARKET VALUE	GAIN/LOSS	TVM	IRR	IRR RANK	TVM RANK
Buyouts	Hahn & Company III - Supplemental Fund	2018	18,750,000	10,862,000	57,377						
Buyouts	HarbourVest IPEP III	1998	40,000,000	39,400,000	61,092,165	79,432	21,771,597	1.6x	8.6%	Second	Second
Buyouts	HarbourVest PA Co-investment Fund	2020	200,000,000	113,700,000	-	NM	NM	NM	NM	NM	NM
Buyouts	Hellman & Friedman Capital Partners IX	2019	90,000,000	84,201,337	2,535,981	NM	NM	NM	NM	NM	NM
Buyouts	Hellman & Friedman Capital Partners VI	2006	125,000,000	119,913,412	222,910,013	2,317,160	105,313,761	1.9x	12.9%	First	Second
Buyouts	Hellman & Friedman Capital Partners VIII	2016	50,000,000	51,060,710	25,930,522	87,609,163	62,478,975	2.2x	26.4%	Second	Second
Buyouts	Hellman & Friedman X	2021	100,000,000	12,180,097	-	NM	NM	NM	NM	NM	NM
Buyouts	HIPEP V-Asia Pacific & Rest of World	2005	30,000,000	28,245,316	37,866,268	2,289,950	11,910,902	1.4x	5.9%	Third	Second
Buyouts	Horizon Impact Fund	2014	50,000,000	44,629,802	51,389,842	31,434,493	38,194,533	1.9x	17.7%	Third	Third
Buyouts	Horizon Impact Fund B	2017	100,000,000	76,750,000	990,000	101,422,595	25,662,595	1.3x	12.9%	Fourth	Fourth
Buyouts	Horizon Strategic Fund - Carlyle Group	2014	100,000,000	105,970,198	112,895,498	83,530,153	90,455,453	1.9x	15.3%	Third	Third
Buyouts	Incline Equity Partners III	2013	15,000,000	16,006,245	41,866,592	154,590	26,014,936	2.6x	33.9%	First	Second
Buyouts	Kelso VII	2003	40,000,000	41,169,937	65,821,118	66,276	24,717,457	1.6x	11.4%	Second	Second
Buyouts	Kelso VIII	2007	150,000,000	146,524,968	193,459,463	21,387,092	68,321,587	1.5x	7.4%	Third	Third
Buyouts	LLR Equity Partners III	2008	30,000,000	29,108,722	63,935,615	2,501,142	37,328,035	2.3x	16.6%	Second	First
Buyouts	LLR Equity Partners IV	2014	50,000,000	45,485,764	89,434,305	23,599,256	67,547,797	2.5x	27.4%	Second	Second
Buyouts	LLR Equity Partners V	2018	75,000,000	68,340,002	19,207,856	86,075,887	36,943,741	1.5x	21.9%	Third	Third
Buyouts	LLR Equity Partners VI	2020	50,000,000	20,841,712	-	NM	NM	NM	NM	NM	NM
Buyouts	Madison Dearborn Capital Partners V	2006	63,817,077	71,556,584	114,081,412	3,591,450	46,116,278	1.6x	7.3%	Second	Second
Buyouts	Madison Dearborn Capital Partners VI	2008	50,000,000	53,258,583	112,050,064	8,591,765	67,383,246	2.3x	23.3%	First	First
Buyouts	Neuberger Berman PA Co-Investment Fund	2020	200,000,000	51,397,159	-	NM	NM	NM	NM	NM	NM
Buyouts	Newbridge Asia IV	2005	40,000,000	38,903,378	86,585,520						
Buyouts	NGP Keystone	2018	25,000,000	10,150,000	-	NM	NM	NM	NM	NM	NM
Buyouts	NGP XII	2018	75,000,000	49,892,983	6,722,419	51,781,146	8,610,582	1.2x	7.4%	Fourth	Fourth
Buyouts	Oaktree Power Opportunities Fund III	2010	25,000,000	19,267,532	28,823,334						
Buyouts	OCM/GFI Power Opportunities Fund II	2005	13,431,284	13,470,852	41,657,114						

SCHEDULE OF INVESTMENTS BY SECTOR

As of December 31, 2021

SECTOR	FUND	VINTAGE	COMMITMENT	CONTRIBUTIONS	DISTRIBUTIONS	MARKET VALUE	GAIN/LOSS	TVM	IRR	IRR RANK	TVM RANK
Buyouts	Penn Asia Investors	2012	133,000,000	119,248,377	84,577,304	130,842,991	96,171,918	1.8x	17.6%	Second	Second
Buyouts	Permira European Fund II	2000	45,672,612	45,672,612	91,560,959	406,053	46,294,401	2.0x	21.6%	First	First
Buyouts	Permira European Fund III	2003	127,062,518	127,340,454	218,052,206	508,690	91,220,442	1.7x	26.1%	Second	Second
Buyouts	Permira IV	2006	136,368,331	138,422,695	208,443,061	48,546,763	118,567,129	1.9x	9.9%	Second	Second
Buyouts	Permira Susquehanna Opportunities - Buyout	2020	40,000,000	18,557,655	-	NM	NM	NM	NM	NM	NM
Buyouts	Permira VI	2017	56,809,657	51,150,582	22,159,631	83,147,246	54,156,295	2.1x	25.9%	Second	First
Buyouts	Permira VII	2019	77,242,464	55,367,294	-	NM	NM	NM	NM	NM	NM
Buyouts	Primavera Capital Fund II	2015	50,000,000	55,692,341	20,050,451	67,715,967	32,074,076	1.6x	11.7%	Third	Third
Buyouts	Primavera Capital Fund III	2019	75,000,000	78,241,480	9,345,614	NM	NM	NM	NM	NM	NM
Buyouts	Providence Equity Partners IV	2000	25,000,000	23,420,840	56,065,270						
Buyouts	Providence Equity Partners V	2004	45,000,000	42,692,347	52,204,745						
Buyouts	Providence Equity Partners VI	2007	49,976,748	54,530,937	75,215,312						
Buyouts	Ridgemont Equity Partners II	2015	50,000,000	50,971,205	50,960,707						
Buyouts	Sentinel Capital Partners V	2014	10,000,000	10,188,099	14,192,807	6,966,420	10,971,128	2.1x	21.9%	Second	Third
Buyouts	Silver Lake Partners V	2018	78,000,000	74,979,179	20,716,515	109,621,690	55,359,026	1.7x	28.8%	Second	Second
Buyouts	Sterling Group Partners IV	2016	20,000,000	19,825,799	14,490,463	28,804,085	23,468,749	2.2x	26.4%	Second	Second
Buyouts	TDR Capital IV	2018	90,264,851	51,394,502	-	96,767,100	45,372,598	1.9x	52.0%	First	First
Buyouts	Thoma Bravo Discover Fund III	2020	20,000,000	14,898,510	-	NM	NM	NM	NM	NM	NM
Buyouts	Thoma Bravo Fund XIII	2019	75,000,000	82,149,247	38,622,739	NM	NM	NM	NM	NM	NM
Buyouts	Thoma Bravo Fund XIV	2020	50,000,000	42,678,750	12	NM	NM	NM	NM	NM	NM
Buyouts	TPG Asia V	2007	22,500,000	21,964,311	27,774,733	3,582,876	9,393,298	1.4x	6.4%	Third	Third
Buyouts	TPG Partners IV	2003	27,907,484	27,981,463	58,314,713						
Buyouts	TPG Partners V	2006	88,831,038	92,531,812	130,072,991	337,111	37,878,290	1.4x	4.8%	Third	Third
Buyouts	TPG Partners VI	2008	44,294,641	50,576,261	72,308,182	2,843,171	24,575,092	1.5x	9.6%	Second	Second
Buyouts	TSG 9	2022	100,000,000	-	-	NM	NM	NM	NM	NM	NM
Buyouts	TSG8	2019	100,000,000	50,410,549	292,630	NM	NM	NM	NM	NM	NM

SCHEDULE OF INVESTMENTS BY SECTOR

As of December 31, 2021

SECTOR	FUND	VINTAGE	COMMITMENT	CONTRIBUTIONS	DISTRIBUTIONS	MARKET VALUE	GAIN/LOSS	TVM	IRR	IRR RANK	TVM RANK
Buyouts	Vista Equity Partners Fund VI	2016	150,000,000	176,571,413	126,687,002						
Buyouts	Vista Equity Partners Fund VII	2019	75,000,000	55,188,990	492,677	NM	NM	NM	NM	NM	NM
Buyouts	Wind Point Partners IX-A	2019	75,000,000	44,311,133	1,434,440	NM	NM	NM	NM	NM	NM
Buyouts	Wind Point Partners VIII	2017	100,000,000	96,616,633	78,383,775						
Buyouts Total			6,118,660,101	\$5,203,662,082	\$5,382,753,053	\$3,689,533,620	\$3,868,624,591	1.7x	14.8%	Second	Second
Growth Equity	Battery Ventures VIII	2007	25,000,000	25,050,751	60,396,581						
Growth Equity	Battery Ventures VIII Side Car Fund	2008	6,768,000	6,803,790	18,828,496						
Growth Equity	HarbourVest Partners VI	1999	200,000,000	196,586,055	251,227,115	603,639	55,244,699	1.3x	3.6%	First	First
Growth Equity	HarbourVest Partners VII	2003	75,000,000	73,687,500	117,075,996	2,198,404	45,586,900	1.6x	6.7%	First	First
Growth Equity	HarbourVest Partners VIII	2006	100,000,000	98,000,000	172,989,043	52,122,377	127,111,420	2.3x	12.0%	First	First
Growth Equity	Insight Partners Fund XII	2021	50,000,000	17,539,234	-	NM	NM	NM	NM	NM	NM
Growth Equity	Insight Venture Partners IX	2015	50,000,000	52,784,788	48,528,033	182,868,978	178,612,224	4.4x	35.6%	Second	First
Growth Equity	Insight Venture Partners VII	2011	20,000,000	22,129,992	53,076,524	19,852,965	50,799,497	3.3x	22.9%	Second	Second
Growth Equity	Insight Venture Partners VIII	2013	50,000,000	53,016,419	111,531,574	53,255,836	111,770,991	3.1x	22.3%	Second	Second
Growth Equity	Insight Venture Partners X	2018	100,000,000	100,373,487	30,012,391	281,382,785	211,021,689	3.1x	51.3%	Second	First
Growth Equity	Insight Venture Partners XI	2019	75,000,000	71,250,000	133,132	NM	NM	NM	NM	NM	NM
Growth Equity	JMI Equity Fund VI	2007	40,000,000	40,000,246	69,876,395	1,514,758	31,390,907	1.8x	11.5%	Second	Second
Growth Equity	JMI Equity Fund VII	2011	10,000,000	9,780,000	23,216,560	907,930	14,344,490	2.5x	17.8%	Third	Third
Growth Equity	JMI Equity Fund VIII	2015	25,000,000	26,900,000	39,423,605	27,314,061	39,837,666	2.5x	31.8%	Second	Third
Growth Equity	Lightspeed India Partners I	2015	15,000,000	14,137,500	2,125,958						
Growth Equity	Lightspeed Venture Partners VII	2005	18,000,000	18,000,000	52,755,264						
Growth Equity	Lightspeed Venture Partners VIII	2008	15,000,000	15,000,000	36,565,286						
Growth Equity	Meritech Capital Partners IV	2011	20,000,000	19,700,000	43,659,998						
Growth Equity	Meritech Capital Partners V	2014	23,000,000	21,965,000	114,467,705						
Growth Equity	New Enterprise Associates 11	2003	25,000,000	25,000,000	63,385,828	3,366,138	41,751,966	2.7x	15.5%	First	First
Growth Equity	New Enterprise Associates 12	2006	35,000,000	35,631,130	47,061,881	4,565,294	15,996,045	1.4x	6.9%	Second	Second

SCHEDULE OF INVESTMENTS BY SECTOR

As of December 31, 2021

SECTOR	FUND	VINTAGE	COMMITMENT	CONTRIBUTIONS	DISTRIBUTIONS	MARKET VALUE	GAIN/LOSS	TVM	IRR	IRR RANK	TVM RANK
Growth Equity	New Enterprise Associates IX	1999	20,000,000	19,600,000	8,739,870	378,961	(10,481,169)	0.5x	(6.1%)	Third	Third
Growth Equity	New Enterprise Associates X	2000	35,000,000	35,028,000	39,412,034	2,722,105	7,106,139	1.2x	2.7%	Second	Second
Growth Equity	NewSpring Growth Capital II	2006	10,000,000	9,850,000	19,519,679						
Growth Equity	Providence Strategic Growth Europe	2021	74,086,106	39,066,018	4,290,092	NM	NM	NM	NM	NM	NM
Growth Equity	Providence Strategic Growth II	2016	60,000,000	77,382,659	123,500,078						
Growth Equity	Providence Strategic Growth III	2018	75,000,000	66,373,803	59,188,372						
Growth Equity	Providence Strategic Growth IV	2019	75,000,000	56,016,270	25,745,407	NM	NM	NM	NM	NM	NM
Growth Equity	Providence Strategic Growth V	2021	50,000,000	6,939,227	-	NM	NM	NM	NM	NM	NM
Growth Equity	TCV X	2019	75,000,000	56,289,972	-	NM	NM	NM	NM	NM	NM
Growth Equity	Weathergage Venture Capital	2007	25,000,000	22,875,000	42,640,891	18,120,177	37,886,068	2.7x	13.9%	Second	Second
Growth Equity	Weathergage Venture Capital II	2010	25,000,000	23,250,000	52,404,909	52,707,283	81,862,192	4.5x	22.0%	Second	First
Growth Equity Total			1,501,854,106	\$1,356,006,841	\$1,731,778,697	\$1,498,184,600	\$1,873,956,455	2.4x	12.5%	Third	Second
Keystone Legacy Fund	Keystone Legacy Fund	2018	200,000,000	5,588,492,866	7,355,590,790	505,879,466	2,272,977,390	1.4x	6.0%	NM	NM
Keystone Legacy Fund Total			200,000,000	\$5,588,492,866	\$7,355,590,790	\$505,879,466	\$2,272,977,390	1.4x	6.0%	NM	NM
Special Situations	ABRY Advanced Securities Fund	2007	7,262,950	23,529,104	38,786,236						
Special Situations	ABRY Senior Equity II	2006	30,000,000	28,388,642	45,127,413						
Special Situations	ADV Opportunities Fund I	2015	50,000,000	60,328,228	17,614,551	69,285,518	26,571,841	1.4x	8.7%	Fourth	Third
Special Situations	Ares PA Opportunities Fund, L.P. - Special Situations	2020	100,000,000	39,278,730	7,821,783	NM	NM	NM	NM	NM	NM
Special Situations	ASF VII B	2016	100,000,000	61,854,639	36,893,131						
Special Situations	ASF VII PA Co-Invest	2016	50,000,000	29,378,255	14,471,058						
Special Situations	ASF VIII B	2019	100,000,000	43,609,295	6,622,414	NM	NM	NM	NM	NM	NM
Special Situations	ASF VIII PA Co-Invest	2019	50,000,000	9,885,240	-	NM	NM	NM	NM	NM	NM
Special Situations	Avenue Special Situations Fund VI	2010	20,000,000	20,068,464	21,075,410						
Special Situations	AXA Secondary Fund III	2004	26,000,000	21,737,894	37,244,706						
Special Situations	AXA Secondary Fund III-2	2004	14,000,000	11,677,210	19,062,764						
Special Situations	AXA Secondary Fund IV	2006	80,000,000	70,134,752	99,186,788						

SCHEDULE OF INVESTMENTS BY SECTOR

As of December 31, 2021

SECTOR	FUND	VINTAGE	COMMITMENT	CONTRIBUTIONS	DISTRIBUTIONS	MARKET VALUE	GAIN/LOSS	TVM	IRR	IRR RANK	TVM RANK
Special Situations	AXA Secondary Fund V B	2012	75,000,000	61,682,742	97,337,534						
Special Situations	Centerbridge Capital Partners I	2006	50,000,000	57,337,396	117,317,806	2,207,310	62,187,720	2.1x	19.2%	First	First
Special Situations	Centerbridge Capital Partners III	2015	30,000,000	38,480,700	27,967,556	34,402,758	23,889,614	1.6x	20.4%	Second	Third
Special Situations	Clearlake Capital Partners IV	2015	15,000,000	22,983,242	33,553,794	17,414,681	27,985,233	2.2x	34.7%	First	Second
Special Situations	Clearlake Capital Partners V	2018	55,000,000	64,507,511	81,992,992	82,585,656	100,071,138	2.6x	57.8%	First	First
Special Situations	Clearlake Capital Partners VI	2020	60,000,000	48,733,270	2,052,484	NM	NM	NM	NM	NM	NM
Special Situations	Clearlake Capital Partners VII	2021	100,000,000	-	-	NM	NM	NM	NM	NM	NM
Special Situations	Dover Street VII	2007	30,000,000	28,696,128	40,300,221	1,256,177	12,860,270	1.4x	9.2%	Third	Third
Special Situations	H.I.G. Bayside Debt & LBO Fund II	2008	30,000,000	31,448,253	48,684,576						
Special Situations	H.I.G. Bayside Loan Opp. Fund III	2013	50,000,000	42,696,553	49,904,323						
Special Situations	H.I.G. Bayside Loan Opp. Fund IV	2015	25,000,000	22,626,299	20,048,554						
Special Situations	KPS Special Situations Fund IV	2014	25,000,000	23,523,004	24,290,154	18,171,414	18,938,564	1.8x	25.0%	Second	Third
Special Situations	KPS Special Situations Fund V	2019	75,000,000	26,983,503	1,488,047	NM	NM	NM	NM	NM	NM
Special Situations	KPS Special Situations Mid-Cap Fund	2019	25,000,000	9,945,346	1,334,931	NM	NM	NM	NM	NM	NM
Special Situations	LBC Credit Partners III	2013	50,000,000	46,696,243	52,653,904				8.3%	Fourth	
Special Situations	Lexington Capital Partners III	1999	35,000,000	34,516,449	43,576,611						
Special Situations	Lexington Capital Partners V	2001	75,000,000	74,623,418	125,170,164						
Special Situations	Lexington Capital Partners VI	2005	50,000,000	53,066,325	72,230,203						
Special Situations	Oaktree Opportunities Fund IX	2013	50,000,000	50,000,000	31,588,063						
Special Situations	OCM Opportunities Fund VII	2007	40,000,000	40,000,000	54,845,803						
Special Situations	OCM Opportunities Fund VII b	2007	40,000,000	36,000,000	62,303,999						
Special Situations	OCM Opportunities Fund VIII	2010	12,500,000	12,583,425	18,155,981						
Special Situations	OCM Opportunities Fund VIIIb	2010	12,500,000	12,500,000	13,585,884						
Special Situations	Platinum Equity Capital Partners III	2013	50,000,000	47,092,256	85,711,250	15,451,679	54,070,673	2.1x	39.0%	First	Second
Special Situations	RRJ Capital Master Fund III	2015	50,000,000	47,336,409	44,239,368	15,877,197	12,780,156	1.3x	11.8%	Third	Fourth
Special Situations Total			1,737,262,950	\$1,353,928,924	\$1,494,240,456	\$686,797,735	\$827,109,268	1.6x	14.7%	First	First

SCHEDULE OF INVESTMENTS BY SECTOR

As of December 31, 2021

SECTOR	FUND	VINTAGE	COMMITMENT	CONTRIBUTIONS	DISTRIBUTIONS	MARKET VALUE	GAIN/LOSS	TVM	IRR	IRR RANK	TVM RANK
Total: Active Investments			9,557,777,157	\$13,502,090,713	\$15,964,362,997	\$6,380,395,421	\$8,842,667,704	1.7x	9.8%	Third	Second
Total: Liquidated Investments			4,908,476,237	\$4,920,169,744	\$9,143,634,717	\$0	\$4,223,464,973	1.9x	16.2%	Second	Second
Total: Commonwealth of Pennsylvania State Employees' Retirement System			14,466,253,394	\$18,422,260,458	\$25,107,997,714	\$6,380,395,421	\$13,066,132,677	1.7x	12.7%	Third	Second

END NOTES

Performance Summary

Commitment reflects current commitment include FX fluctuations for non-USD funds.

Contributed Capital includes contributions for investments, management fees and expenses to underlying partnership investments.

Distributions include stock distributions.

Net DPI, or Distributed to Paid-In-Multiple, is calculated as Distributed Capital divided by Contributed Capital, inclusive of StepStone fees.

Net TVM, or Total Value Multiple, is calculated as Total Value, which is comprised of Market Value plus Distributed Capital, divided by Contributed Capital, inclusive of StepStone fees.

Net IRR is net of managers' fees, expenses, and carried interest, inclusive of StepStone fees.

Portfolio Performance vs Benchmarks

Benchmark is a dollar-weighted calculation of quarterly changes in the Russell 3000® Index. Russell Investment Group is the source and owner of the trademark, service marks and copyrights related to the Russell Indexes.

Russell® is a trademark of Russell Investment Group. Returns shown are time-weighted (TWR).

Benchmark is provided by Burgiss Private iQ and reflects Global Private Equity Funds (excluding Real Assets and Real Estate) Median IRR as of December 31, 2021, for funds with vintage years 1980 to 2021.

Returns shown are dollar-weighted (IRR).

Benchmark is provided by Burgiss Private iQ and reflects Global pooled returns for Buyout (including Natural Resources), Venture Capital, Special Situations (including Distressed and Mezzanine), and all Private Equity (excluding Real Assets and Real Estate), respectively, as of December 31, 2021, for funds with vintage years 1980 to 2021. Returns shown are dollar-weighted (IRR).

Benchmark is provided by Burgiss Private iQ and reflects Global Upper Quartile IRR for Buyout (including Natural Resources), Venture Capital, Special Situations (including Distressed and Mezzanine), and all Private Equity (excluding Real Assets and Real Estate), respectively, as of December 31, 2021, for funds with vintage years 1980 to 2021. Returns shown are dollar-weighted (IRR).

Core Portfolio vs Russell 3000 Index

Benchmark is a dollar-weighted calculation of quarterly changes in the Russell 3000® Index. Russell Investment Group is the source and owner of the trademark, service marks and copyrights related to the Russell Indexes.

Russell® is a trademark of Russell Investment Group. Buyout, Growth Equity, and Special Situations sectors represent PASERS core portfolio of investment returns within each sector.

Keystone Legacy Fund contains Buyout, Venture Capital, and Special Situation funds defined as non-core by PASERS.

Portfolio Company Diversification

Due to the nature of the underlying assets of the funds, certain partnerships do not disclose data regarding underlying portfolio company positions. As such, the data presented herein is based on available data provided by general partners as of December 31, 2021. Fund-of-Funds, Secondary Funds and Keystone Legacy Fund are excluded from portfolio company level details. Company level valuations represent PASERS commitment divided by fund size to reflect the fair market value of company level investments.

Schedule of Investments by Vintage Year & Sector

Commitment reflects current commitment including FX fluctuations for non-USD funds.

Contributions includes management fees and expenses.

Gain/Loss represents since inception total value change of active investments unless otherwise noted.

NM - Not Meaningful

IRR and TVM for certain vehicles may have been impacted by Stepstone's or the underlying GPs' use of subscription-backed credit facilities by such vehicles. Reinvested/recycled amounts increase contributed capital.

Fund quartile rankings provided by Burgiss Private iQ as of December 31, 2021 and represent sector-comparable funds aggregated by vintage year, asset class and geography in which SERS made investments.

Keystone Legacy Fund performance represents since inception returns for all non-core funds.

These figures have been prepared by Stepstone on behalf of SERS and have not been provided by any General Partner.

Past performance is not necessarily indicative of future results and there can be no assurance that the fund will achieve comparable results or avoid substantial losses.

Definitions on Pages 30-31 - Redacted